Grade 5 Science Curriculum
Mansfield Middle School

The 5th grade science curriculum endeavors to actively involve students while teaching them to understand and appreciate the world around them. The curriculum includes life earth and physical units. In order to create a unit structure which provides a stable platform for students to discover, interpret, analyze and make conclusions, each unit of study will consist of essential questions, read aloud literature links, hands-on activities, lab exploration, reading for information and technology integration.

Science and Health

As a connection between school, science, and the community, students will be exposed to a number of health-related topics that apply to their everyday lives. Students will explore fire safety, electrical safety, ticks and Lyme Disease, head lice, the anti-smoking program ***Science, Tobacco and You,*** as well as the ***Good Decisions Program***, through their science classes.

The Units

Weather Unit: Students will become aware of the conditions and factors that create weather, the changes that occur in weather and how those change affect our daily lives. Students will be able to interpret various weather instruments and predict upcoming weather patterns. This will include an emphasis on the predictable movement of the Earth and the moon relative to the sun in order to explain cycles such as day/night, years, moon phases and eclipses.

Cell Unit: Students will engage in many action-oriented activities including the use of the microscope and the construction of a model cell to understand how cells work together as part of any organism. Students will also understand that cells carry on certain activities that keep organisms alive. They will explore the role of genes in determining traits of an organism.

Sound Unit:The main objective of this unit is to help students understand that sound waves are produced by vibrations and vary in amplitude, frequency and wave length and that they travel through matter. Students will understand and describe the structure of the human ear and the role it plays when interpreting sound.

Light Unit: Students will engage in observations, labs and demonstrations to distinguish the properties of light and its uses. Students will compare and contrast the structures of the human eye with those of a camera. Using periscopes, telescopes, eyeglasses and

magnifiers students will understand that light travels in a straight line and can be reflected by a mirror, refracted by a lens, or absorbed by objects.

Classification Unit: The main objectives of this unit are to help students understand the system of classification and to facilitate their appreciation and understanding of the fascinating variety of animals in the animal kingdom. Students will research, identify and classify many life forms from animals in their backyards to animals found around the world

Grade 5 Curriculum: Cells

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Cell Unit • Identify the three characteristics of a living thing and name three things that all organisms need. • Explain how animal and plant cells are similar and different. Describe their organelles and the function of these organelles. • Explain the differences between dominant and recessive genes. How do they play a role in the determination of various traits, such as hair and eye color? • Describe the positive and negative effects of successful cloning experiments. Think of some possible outcomes that this scientific discovery may have on society and the economy. **Extension Activity:** • Discover the similarities and differences between mitosis and meiosis. • How does cloning work? Further details as needed.	***Cell Unit:*** TSWBAT explain how cells organize into tissue, organs and systems. TSWBAT describe the differences between plant and animal cells. TSWBAT explain three functions of cells that help and organism survive. TSWBAT explain how cells get food and water. TSWBAT describe how cells get energy through cellular respiration. TSWBAT explain how cells use energy to grow. TSWBAT describe four traits determined by genes and two traits determined by other factors (mutation and disease) TSWBAT build a model cell TSWBAT make/create simple slides of cells and view them under a microscope.	Cell Unit Labs: 1. Discovering the microscope: identification of parts and practice focusing. 2. Plant vs. Animal Cell : making slides using stains. 3. Clay or Jello Cell Models: students build models representing cell organelles. 4. Low Does Chance Affect the Combination of Genes? (A look at dominant and recessive genes using bean seeds) 5. Lab: Reproducing Mendel's Experiment using Rapid Growing Radish Seeds Cell Unit Activities: 1. Punnette squares to determine genetic combinations 2. Identification of Cell Structures (Prentice Hall)	• Performance Assessment • Teacher observations • Unit Quizzes and tests • Homework • Essential Questions (Before you begin and In Conclusion) • Venn Diagrams • Lab Performance Assessment	***Text:*** • Scott Foresman, Science 5 Chapters 5, 6, and 7 • Prentice Hall: The Cell ***Literature Connection:*** • YUCK! (M. Janulewicz) • YIKES! (M. Janulewicz) • Blood and Gore! (V. Cobb) • Dirt and Grime (V. Cobb) • The Home (Scholastic) • Cells 'R' Us (• The Magic School Bus Inside the Human Body (J. Cole) **Laser disc technology:** • Science Sleuths: The Case of the Chilly Mammoth (Video Discovery) • Science Sleuths: The Ballad of Bobby-Ray (Video Discovery) Videos: • Discovering the Cell (National Geographic) • The Cell (Textbook Tapes: Video Publishing and Printing) • Bill Nye: Cells (PBS) • Bill Nye: Photosynthesis and Respiration (PBS) • The Microscope (Clearvue, Inc.)

Grade 5 Curriculum: Cell Unit continued

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Cell Unit continued: .	***Cell Unit continued:*** TSWBAT review science terminology by participating in Cellular Jeopardy.	**Cell Unit Activities continued:** **3. Science Sleuths laser disc:** The Chilly Mammoth: a life science mystery that explores cell structure and cell activity. **5. Science Sleuths laser disc:** The Ballad of Bobby Ray: A life science mystery that explores genetics. 6. Students record data from a Pea Plant, analyze the information in a chart, and determine dominant and recessive genes. 7. Students complete a Venn Diagram comparing and contrasting plant and animal cells. 8. Students critically analyze data (gene combinations), create punnett squares and determine parent-offspring outcomes. 9. Dragon Genetics: An Investigation into Complete and Incomplete Dominance	• See previous page	***Resources:*** • Small Living Things (Milliken Blackline Master) • How Nature Works (Reader's Digest, 1991) • **Model Animal Cell (Boreal)** • Model Plant Cell (Boreal) • The World of the Microscope (Usborne Science Exper.) Internet links (sites): http://chroma.mbt.washington.edu/outreach/BINGO.html (Activity: Classification BINGO with DNA) http://unite.ukans.edu/explorer/explorer-db/rsrc/783750677-447DED81.1htm (Jello Cells)

		Note taking Text and Newspaper Reading Review Games such as Cellular Jeopardy Double Entry Journals		

Grade 5 Curriculum: Sound

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Sound: • Define sound and describe how sound travels. • Explain the various ways that messages can be communicated using sound waves. - Explain the connection between sound and hearing **Extension Activity:** Explore crystal radios of the past vs. radios in our future. Further details as needed.	***Sound Unit:*** TSWBAT demonstrate that vibrations produce sound waves. TSWBAT demonstrate that sound waves vary in frequency and travel through matter. TSWBAT send and receive sound waves. TSWBAT identify various sounds based on pitch. TSWBAT change pitch based on a given substance. TSWBAT define sound and describe how sound travels. TSWBAT identify the main components of the inner ear. TSWBAT explain why sound, as a pollutant, can be damaging and dangerous to our bodies. TSWBAT explain how sound improves our lives, from the enjoyment of music to the use of technology. TSWBAT identify the structure of the ear.	**Sound Unit Labs:** 1. Dancing Salt (vibrations) 2. Discover Sound Lab Stations (1-4) 3. Tuning Up the Band (determining pitch) 4. Vibrations! (using tuning forks and the human voice) 5. Exploring Sound Waves (using water, air and solid matter) 6. Directing Sound : Building a megaphone 7. Making a Singing Ruler (examining high and low pitch) 8. Building Musical Instruments a. comb kazoo b. string guitar c. drinking straw oboe Sound Unit Activities: 1. Sounds heard and produced (frequency and range) 2. Exploring Police Radar 3. Musical Bottles (vibrations) 4. Sounds Around Us 5. How Sound Travels 6. The Effects of Noise on Human Health and Welfare 7. Tin-Can Telephones 8. "Tooth Tunes" 9. Tuning Forks –	• Performance Assessment for each student/teacher generated project. • Teacher observations • Unit quizzes and tests • Homework • Classwork • Essential Questions (comparing the Before You Begin and In Conclusion) • Classroom Activity Sheets • Text Chapter Questions	***Textbook:*** Scott Foresman, Science 5 Sound, Reading Essentials in Science (copyright 2004) **Resources:** • Focus on Physical Science (Merrill Publishing) • HBJ Science – Teacher Resource Book • Scott Foresman 5 – Teacher Resource Book • Light and Sound (Milliken Blackline Master) • ClassWorks!! Listening Up: All About Sound (Scholastic Inc.) • Preparing for a Quieter Tomorrow (EPA) • The World of Light and Sound - Tobin's Lab • Sound – Perfection Learning • BrainPop.com **Video:** Listen! Hear! (National Geographic) Bill Nye: Sound (PBS) Breaking the Silence: An Introduction to Sound (Rainbow Educational) **Literature Connection:** **The Very Clumsy Click Beetle (E. Carle)**

	TSWBAT explain how the brain receives and interprets sound waves (nervous system)	frequency and amplitude Notetaking Reading Video Review Games		Polar Bear, Polar Bear, What Do You Hear? (E. Carle) Exploring Sound (E. Catherall) The Science of Music (M. Berger)

Grade 5 Curriculum: Science (Weather)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Title: Weather • **How does the movement of water affect the weather?** • **Describe the major source of energy and the factors which interact to cause our weather**.	***Water Cycle*** TSWBAT explain how the movement of water in the atmosphere and on the Earth affects our weather. TSWBAT identify and define the parts of the water cycle. TSWBAT identify the forms of precipitation. TSWBAT determine that energy in the atmosphere comes from the sun and the Earth's movement and is transferred in various forms. TSWBAT list the sources of energy which create weather.	***Lab Activities*** 1. Hands On Weather:: Make a Cloud Evaporation Lab 2. Reaching Dew Point & Saturation Point. 3. Does water on a sweating can come from inside the can or from the air? 4. Does air take up space? **Water Cycle Activities** 1. Draw and label the water cycle. 2. Summarize the water cycle in small groups after reading *The Magic School Bus at the Waterworks* 3. Cloud Walk 4. Cloud identification Chart game 5. Create a cloud and sky windows Notetaking Reading Videos Review games Double Entry Journal **Lab Activities:** 1. Does air have weight? 2. Does warm air take up more space than cold? 3. Can we observe the presence of gases in the air?	• Performance Assessments • Teacher observations • Unit Quizzes & Tests • Homework • Essential Questions • Text Chapter Questions • Classroom Activity Sheets	**Text:** • Prentice Hall: Weather **Literature connection:** • Night of the Twisters(Ruckman) • Magic School Bus at the Water works (Cole) • The Magic Schoolbus Inside a Hurricane (Cole) • One Day in the Prairie (George) • Global Warming (Pringle) ***Videos*** • The Greenhouse Effect (Boreal) • Tell Me Why: Water and Weather (Clearvue) • Clouds & What They Mean • Weather Channel Videos • Bill Nye: Conduction, Convection & Radiation (PBS) • Bill Nye: Precipitation • Bill Nye: Layers of the Atmosphere (PBS) • The Air Around Us (100% Educational Videos) **Resources and Supplemental Texts:** • Weather (Golden Guide Series, 1987) • The Farmer's Almanac • The Weather Wizard's Cloud Book

Grade 5 Curriculum: Science (Weather)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Sources of Energy (continued) **Extension Activity:** Students have the opportunity to build their own weather station.	TSWBAT explain the composition of the layers of the atmosphere. TSWBAT describe how air moves and the effects of large air masses. TSWBAT list and explain the factors considered when recording and making predictions. These include temperature, precipitation, wind direction and speed, humidity, sunlight, air pressure. TSWBAT describe the sun-earth seasonal relationships. TSWBAT perform simple experiments, collect and analyze data and draw conclusions about the	4. Comparing the angle of insolation and temperature changes. 5. Heating Up the Earth 6. Heating Up the Earth 7. Does warm air mix readily with cold air? 8. Land & Sea Breezes 9. Thunderstorm in a Box 10. Cloud in a Bottle **Additional Activities:** 1. Willy Willies and Whirlpools of Wind 2. Draw and explain the Coreolis Effect. 3. Weather Map activity: draw North American air masses. 4. Make a tornado 5. Skit: warm vs. cold front. 6. Weather bingo 7. Diagram Greenhouse Effect and Solar Radiation. 8. Cause & Effect: Climate vs. Weather 9. Static Attack	• Performance Assessment • Teacher Observations • Unit Quizzes and Tests • Homework • Essential Questions • Classroom Activity Sheets • Text Chapter Questions	**Weather Resources– Supplementary** • The Weather Report (Makemaster Blackline) • Wild About Weather (National Wildlife Foundation Naturescope) • Scientific Matters (Robert Hazen) • Meteorology (Milliken) - Transparencies • Hurricane! An event-based Science module(Dale Seymour) • Box (Educational Insights) Science • Project Weather (Weather Channel) • Natural disaster Book Series: Tornadoes & Hurricanes Storms & Blizzards • Weather Instruments Resource Book

Grade 5 Curriculum: Science (Weather)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
• **Describe the Greenhouse Effect. What is its long term climatic effect on our planet?** .	• Students will describe some of the common storm types TSWBAT identify the gases involved in the Greenhouse Effect. TSWBAT describe the causes of the Greenhouse Effect. TSWBAT determine the effects of the build up of greenhouse gases. TSWBAT determine how weather affects our lives.	9. Venn Diagram: Tornadoes vs. Hurricanes 10. Hurricane! An event-based science meteorology module ***Lab Activity: Greenhouse*** **1.** Growing plants in the classroom 2. Bubbles-Greenhouse Eff. **Activities:** 1. Diagram global warming. 2. Double Entry Journal: Moderating Global Warming. 3. Packet: The Hole in the Ozone. Notetaking Reading Videos Filmstrips Review games Reading Double entry Journals	• Performance Assessment • Teacher Observations • Unit Quizzes and Tests • Homework • Essential Questions • Classroom Activity Sheets • Text Chapter Questions	Weather Resources continued **Internet Links:** • Internet:http:www.ucsusa.org/global • www.comet.ucar.edu Thunderstorm in a Box Cloud in a Bottle Static Attack • www.weather.com • http://encr.syr.edu/Projects Bubbles-Greenhouse Eff. Newton's Apple Create cloud/sky windows • www.ktca.org/newtonsclassics • http://ericir.syr.edu/Virtual/lessons/Science/Earth/EAR001.html Air and Its Characteristics) Air Pressure

Grade 5 Curriculum: Science (Weather)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
• **Identify weather instruments. What is their function? Make a prediction using the information gathered from the weather instruments.**	TSWBAT identify various weather instruments including barometer, psychrometer, thermometer, anemometer to name a few. TSWBAT read a weather map. TSWBAT make simple forecasts using weather instruments. TSWBAT collect and analyze data and make weather predictions using this data. TSWBAT explain the movement of the Earth and moon relative to the sun. TSWBAT explain the cycles of day/night, year, seasons, moon phases and eclipses.	**Lab Activities:** 1. Make a barometer. 2. Make a sling psychrometer. 3. Make an anemometer **Activities:** 1. Daily weather announcements. 2. Chart the daily weather. 3. Tools of the Trade 4. Maintain a classroom weather station. 5. Kit: Constructing a moon phase calendar 6. Demonstration of the moon's rotation (Scott Foresman p. 337) Notetaking Videos Teacher designed handouts Review games Reading Double Entry Journals	• Performance Assessment • Teacher Observations • Unit Quizzes and Tests • Homework • Essential Questions • Classroom Activity Sheets • Text Chapter Questions	Internet Links continued: • http://ericir.syr.edu/Virtual/Lessons/Science/Earth/EAR004.html: Clouds • http://eric.syr.edu/Virtual/Lessons/Science/Earth/EAR0009.html: Examination of Weather • http://ericir/syr.edu/Virtual/Lessons/Science/Earth/EAR0028.html: Weather Forecasting. Additional Resources : Moon: -*The Moon* VHS - *Science Project Ideas About the Moon*, R. Gardner - Lunar Charts and Moon Map - BrinPop.com Literature: *The Moon and You* by E.Krupp *Does the Moon Change Shape* by M. Golddish

Grade 5 Curriculum: Science (Light)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
What makes color? **What are the properties of light?** **How is a camera like the human eye?** **How does the human eye interpret light and images?**	TSWBAT understand that light travels in waves. TSWBAT explain the difference between reflection and refraction. TSWBAT distinguish between transparent, translucent and opaque. TSWBAT list the colors of the visible spectrum and understand how color affects absorption and reflection. TSWBAT demonstrate how light behaves through concave and convex lenses. TSWBAT explain how light and images are received by the human eye and interpreted by the brain.	• Jello Optics: Edible Optics • Making 3-D glasses • Research paper in coordinated with the LMC • Light stations to include: a) Why is the sky blue? b) Mixing colors c) Optics Table • Laserdisc: The Puzzling Picture • Boreal Science Kits: a) Reflection and refraction b) Experiments with Lenses • Making a Pinhole Camera Guest Speaker – Ophthalmology- Community doctor to describe the eye and how it works.	• Performance Assessment • Teacher Observations • Unit Quizzes and Tests • Homework • Essential Questions • Classroom Activity Sheets • Text Chapter Questions	<u>Textbook:</u> - Scott Foresman Science pages 268-303 (copyright 1986) - Light, Reading Essentials in Science (copyright 2004) <u>Additional Resource Books:</u> - Light, Sound and Waves: Science Fair Projects - Light and Sound : Milliken Grades 5-9 - Milliken Discover Light and Sound Transparencies - Physics for Kids: 49 Easy Experiments with Optics - BrainPop.com - Tobin's Lab: The World of Light and Sound <u>Resource Materials:</u> - Charts: The Human Eye - The Nervous System - Model: Human Eye - Lenses, Mirrors, Prisms <u>Video:</u> • Bill Nye: Waves • PBS 3-2-1 Contact Series: a) Facts of Light b) Living Color c) Eye of the Beholder • Sight (Eyewitness Video) • Out of the Darkness (Rainbow Educational) • Light Fantastic

				(National Geographic) <u>Literature Connection:</u> *Arctic Lights, Arctic Nights* by D. Miller *Day Light, Night Light: where light comes from* by F.M. Branley
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Grade 5 Curriculum: Science (Classification)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Classification: (Vertebrate Animals) • Describe how scientists distinguish between living and non-living things. • Living things are classified into kingdoms, classes and groups for many different reasons. Identify the 5 major kingdoms, 5 classes of vertebrate animals and the 2 major groups of animals. • Explain how classification is an important part of our daily lives. **Extension Activity:** Create a classification identification key. Further details as needed.	***Vertebrate Animals:*** TSWBAT identify the five kingdoms that are presently recognized. TSWBAT describe the two major groups of animals. TSWBAT research data and prepare a scientific paper on a specific animal. TSWBAT report to the class pertinent information they have discovered about an animal they have studied and written about. TSWBAT use reference books to quickly find facts about different types of animals. TSWBAT use microscopes to identify specimens.	**Vertebrate Animal Labs:** 1. Classification of pasta and hardware. (see internet link for Where Is My Peanut?) 2. Observation/Identification skill lab to classify specimens within the 5 kingdoms of animals. 3. Study of aquatic vertebrates from local pond using microscopes. **Vertebrate Animal Activities:** 1. Science Sleuths laser disc: The Fast Fish Frenzy; a life science mystery that explores adaptation and evolution. 2. Research paper about a specific animal.	• Performance Assessment for all student/teacher generated material. • Teacher Observations • Unit Quizzes and Tests • Homework • Essential Questions (Before You Begin and In Conclusion)	***Literature Connection:*** • Secrets of a Wildlife Watcher (J. Arnosky) • Long Spikes (J. Arnosky) • One Day in the Desert (J. Craighead George) • One Day in the Prairie (J. Craighead George) • One Day in the Alpine Tundra (J. Craighead George) • I am the Ocean (S. Marshak) • Heartland (D. Siebert) • Somewhere Today (B. Kitchen) **Laser disc:** • Science Sleuths: The Fast Fish Frenzy by Video Discovery **Videos:** • The Five Kingdoms of Life (Educational Video Network) • Classification of Living Things (Understanding Science Educational Video) • Scientific Problem Solving (Understanding Science Educational Video) • Life on Earth (Warner Home Video) • Reptiles and Amphibians (National Geographic) • How Organisms are Grouped (Clearvue) • Examination of Life (TV/Video Publishing Inc.)

Grade 5 Curriculum: Science (Classification)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Classification cont. (Vertebrate Animal) .	See previous page	Vertebrate Animal Activities cont. 2. Compare and contrast the animals and their environment after listening to the stories (One Day in the Desert and Prairie) Note taking Reading Videos Review games Double Entry Journals	See previous page	Text: • Prentice Hall, Parade of Life • Scott Foresman, Science 5 Supplementary Resource Books: • Scott Foresman Resource Book Grade 5 (parallels the textbook) • Amazing Mammals (National Wildlife Federation) • Animals (Milliken) • Classification (Milliken) • Small Living Things (Milliken) • Project Wet resource guide • Kid's Discover, Insects • Mother Nature's Greatest Hits (National Wildlife Fed.) • Our Wonderful World (AIMS) • Animal "KIND" Newsletter (National Humane Society) Internet Sites: http://encir.syr.edu/virtual/Lessons/Science/Process_skills/SPS0011.html **(Activity: Where Is My Peanut?)** http://encir.syr.edu/virtual/Lessons/Science/Process_skills/SPS0003.html **(looking at variables)**

Grade 5 Curriculum: Science (Classification)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Classification (Invertebrate Animals) • What are the advantages and disadvantages of insects in our world? - How are insects classified? - What are the benefits (good or helpful things) of insects? - What are the harmful (bad things) effects of insects? - How do insects make animals, humans and plants sick? - How can insects help farmers grow better crops? - What are the economic and health impacts? **Extension Activity:** Insect Champions – Internet Research Project Further details as needed.	***Invertebrate Animals:*** TSWBAT explain how different groups of animals may have vastly different methods of completing their life cycle. TSWBAT determine the different ways insects compete for food and their needs for survival. TSWBAT identify that insects are the largest group of animals and are of the greatest importance.. TSWBAT identify distinct body parts that makes an insect recognizable.	**Invertebrate Animal Labs:** 1. Grasshopper vs. Cicada Lab using microscopes 2. Observe an Insect : Pond Study **(Incredible Insects)** Invertebrate Animal Activities: 1. Write a letter to Dom DeLuise regarding the inaccuracies of his book, *Charlie the Caterpillar* 2. Complete a Venn Diagram detailing the similarities and differences of insects. 3. Create Your Own Insect 5. Insect Jeopardy	• Venn Diagrams • Performance Assessment • Lab Performance Assessment • Teacher Observations • Unit Quizzes and Tests • Homework • Essential Questions	***Literature Connection:*** • The Very Quiet Cricket (E. Carle) • Charlie the Caterpillar (D. Deluise) • Creepy Crawly Caterpillars (P. Facklam) • The Cicada (R. Hutchins) • Insects Are My Life (M. McDonald) Laser disc: • Insects, The Little Things that Run the World (Smithsonian) Videos: • The Benefits of Insects (National Geographic) • Discovering Insects (National Geographic) • Insects: Bill Nye (PBS) • Tell Me Why : Insects (Paramount) • Insects, What Are They? • The Rotting Log (Missouri Botanical Gardens MBG Video) Filmstrips: • Helpful/Harmful Insects (Coronett Filmstrips Inc.) • Insects, What They Are (Coronett Filmstrips Inc.)

Grade 5 Curriculum: Science (Classification)

Unit w/ Essential Questions	Learning Objectives	Activities	Assessment Strategies	Resources
Classification **(Invertebrate Animals)**	*See previous page for learning objectives.*	**Invertebrate Animal Activities cont.** 6. Cause and Effect chart for helpful/ harmful 7. Staying Alive! 8. Build a life cycle flip book	See previous page for assessment strategies	Computer Software: • The World of Insects (Apple) • SimAnt (IBM) • Organizing Animals (IBM) Text: • Scott Foresman, Science 5 • The Insect World Supplementary Resource Books: • Scott Foresman Resource Book Grade 5 (parallels the textbook) • Insect (Golden Guide) • Field Guide to North American Insects and Spiders (Audobon) • Incredible Insects (National Wildlife Fed.) • Entomology Manual • Studying Insects (Milliken) • How Nature Works (Readers Digest) • Bug Bingo (Rainbow Collection) Special Reinforcement Material: • Insect by Troll (Lower-level reading book with cassette tape)